

LEVEL 1 - 1 PATENT

1. 5,656,186, Aug. 12, 1997, Method for controlling configuration of laser, induced breakdown and ablation, Mourou, Gerard A., Ann Arbor, Michigan Du, Detao, Ann Arbor, Michigan Dutta, Subrata K., Ann Arbor, Michigan Elner, Victor, Ann Arbor, Michigan Kurtz, Ron, Ann Arbor, Michigan Lichter, Paul R., Ann Arbor, Michigan Liu, Xinbing, Ann Arbor, Michigan Pronko, Peter P., Dexter, Michigan Squier, Jeffrey A., Ann Arbor, Michigan, The Regents of the University of Michigan, Ann Arbor, Michigan (02)

CORE TERMS: pulse, laser, width, breakdown, threshold, beam, fluence, spot, energy, ablation...

<=2> GET 1st DRAWING SHEET OF 10

Aug. 12, 1997

Method for controlling configuration of laser induced  
breakdown and ablation

REISSUE: This Patent was reissued on Mar. 19, 2002 as Reissue Patent Re 37,585.

Reissue Application filed Feb. 1, 2001 (O.G. Oct. 16, 2001) Ex. Gp.: 1742;  
Re. S.N. 09/775,106

Reissue Application filed Feb. 1, 2000 (O.G. Jul. 31, 2001) Ex. Gp.: 1742;  
Re. S.N. 09/775,069

CORE TERMS: pulse, laser, width, breakdown, threshold, beam, fluence, spot,  
energy, ablation...

Your search request has found no CASES.

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**Current session 18/06/2002**

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Last connection: 17/06/02 23\*02\*10

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Estimated cost : 0.62 USD

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Last database update: 2002/06/12 (YYYY/MM/DD) 2002-23/UP (basic update)

Search statement 1

**Query/Command : us5656186/pn****\*\* SS 1: Results 1**

Search statement 2

**Query/Command : prt full nonstop legalall**

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1 / 1 PLUSPAT - ©QUESTEL-ORBIT - image

PN - US5656186 A 19970812 [US5656186]  
 TI - (A) Method for controlling configuration of laser induced breakdown and ablation  
 PA - (A) UNIV MICHIGAN (US)  
 IN - (A) KURTZ RON (US); LIU XINBING (US); DU DETAO (US); DUTTA SUBRATA K (US); ELNER VICTOR (US); LICHTER PAUL R (US); MOUROU GERARD A (US); PRONKO PETER P (US); SQUIER JEFFREY A (US)  
 AP - US22496194 19940408 [1994US-0224961]  
 PR - US22496194 19940408 [1994US-0224961]

IC - (A) B23K-026/02

EC - A61B-018/20  
B23K-026/06F  
B23K-026/36  
B23K-026/38B  
B23K-026/40B

PCL - ORIGINAL (O) : 219121690

DT - Corresponding document

CT - US4087672; US4114018; US4464761; US4579430; US4630274; US4665913;  
US4675500; US4727381; US4729372; US4732473; US4733660; US4764930;  
US4838679; US4839493; US4848340; US4881808; US4901718; US4907586;  
US4925523; US4930505; US4942586; US4988348; US5062702; US5093548;  
US5098426; US5141506; US5207668; US5208437; US5219343; US5235606;  
US5246435; US5269778; US5289407; US5312396; US5335258; US5348018;  
US5389786; US5454902; US5558789; DE4119024 A1; WO8908529  
C.V. Shank, R. Yen, and C. Hirlimann, "Time-Resolved Reflectivity Measures of Femtosecond-Optical-Pulse-Induced Phase Transitions in Silicon", Physical Review Letters, vol. 50, No. 6, 454-457, Feb. 7, 1983.

C.V. Shank, R. Yen, and C. Hirlimann, "Femtosecond-Time-Resolved Surface Structural Dynamics of Optically Excited Silicon", Physical Review Letters, vol. 51, No. 10, 900-902, Sep. 5, 1983.

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International Search Report Form PCT/ISA/210 Dated 31 Jul. 1995 and Mailed 4 Aug. 1995.

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**STG** - (A) United States patent

**AB** - In one aspect the invention provides a method for laser induced breakdown of a material with a pulsed laser beam where the material is characterized by a relationship of fluence breakdown threshold (F<sub>th</sub>) versus laser beam pulse width (T) that exhibits an abrupt, rapid, and distinct change or at least a clearly detectable and distinct change in slope at a predetermined laser pulse width value. The method comprises generating a beam of laser pulses in which each pulse has a pulse width equal to or less than the predetermined laser pulse width value. The beam is focused to a point at or beneath the surface of a material where laser induced breakdown is desired. The beam may be used in combination with a mask in the beam path. The beam or mask may be moved in the x, y, and Z directions to produce desired features. The technique can produce features smaller than the spot size and Rayleigh range due to enhanced damage threshold accuracy in the short pulse regime.

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1/1 LGST - ©LEGSTAT

**PN** - US 5656186 [US5656186]

**AP** - US 224961/94 19940408 [1994US-0224961]

**DT** - US-P

**ACT** - 19940408 US/AE-A  
APPLICATION DATA (PATENT)  
US 224961/94 19940408 [1994US-0224961]

19940902 US/AS02

ASSIGNMENT OF ASSIGNOR'S INTEREST

REGENTS OF THE UNIVERSITY OF MICHIGAN, THE WOLVERINE TOWER,  
ROOM 2071 3003 S. ST \* MOUROU, GERARD A. : 19940407; DU, DETAO :  
19940407; DUTTA, SUBRATA K. : 19940407; ELNER, VICTOR : 19940407; KURTZ,  
RON : 19940407;

19970812 US/A  
PATENT

19990928 US/RF  
REISSUE APPLICATION FILED  
19990804

20010731 US/RF  
REISSUE APPLICATION FILED  
20000201

20011016 US/RF  
REISSUE APPLICATION FILED  
20010201

**UP** - 2001-44

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**1 / 1 CRXX - ©CLAIMS/RRX**

**PN** - 5,656,186 A 19970812 [US5656186]  
**PA** - Michigan, University of  
**ACT** - 19990804 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 19990928  
REISSUE REQUEST NUMBER: 09/366685  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1742  
Reissue Patent Number: USRE37585

20000201 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 20010731  
REISSUE REQUEST NUMBER: 09/775069  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1742

Reissue Patent Number:

20010201 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 20011016  
REISSUE REQUEST NUMBER: 09/775106  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1742

Reissue Patent Number:

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**AN** - 200142-001612  
**PN** - 5656186 A [US5656186]  
**OG** - 2001-10-16  
**ACT** - REISSUE APPLICATION FILED

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**AN** - 200131-001297  
**PN** - 5656186 A [US5656186]  
**OG** - 2001-07-31  
**ACT** - REISSUE APPLICATION FILED



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**3 / 14 PAST - ©Thomson Derwent**

**AN** - 199951-002770  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**4 / 14 PAST - ©Thomson Derwent**

**AN** - 199950-002719  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**5 / 14 PAST - ©Thomson Derwent**

**AN** - 199949-002630  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**6 / 14 PAST - ©Thomson Derwent**

**AN** - 199948-002873  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**7 / 14 PAST - ©Thomson Derwent**

**AN** - 199947-002840  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**8 / 14 PAST - ©Thomson Derwent**

**AN** - 199946-002899  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**9 / 14 PAST - ©Thomson Derwent**

**AN** - 199945-002802  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**AN** - 199944-002326  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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*11 / 14 PAST - ©Thomson Derwent*

**AN** - 199943-002793  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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*12 / 14 PAST - ©Thomson Derwent*

**AN** - 199941-002696  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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**AN** - 199939-000730  
**PN** - 5656186 A [US5656186]  
**OG** - 1999-09-28  
**ACT** - REISSUE APPLICATION FILED

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*14 / 14 PAST - ©Thomson Derwent*

**AN** - 199937-001481  
**PN** - 5656186 A [US5656186]  
**ACT** - PATENT SUIT

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*1 / 1 LITA - ©Thomson Derwent*

**AN** - P1999-37-42  
**FS** - PATENT (P)  
**PN** - US5656186 19970812 (Utility)  
**PF** - Positive Lights Incorporated  
**DF** - Clark MXR Incorporated  
**CT** - CA, Northern Dist.  
**DN** - C-99-3937 JL  
**FD** - 1999-08-23  
**ACT** - A complaint was filed.

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1 Patent Groups

**\*\* SS 1: Results 12**

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**PN** - AT 159880 E 19971115 [ATE159880]  
**TI** - VERFAHREN ZUM KONFIGURATIONSTEUERN VON LASERINDUZIERTEM ZERSTOEREN UND ABTRAGEN  
**IN** - MOUROU GERARD A [US]; DU DETAO [US]; DUTTA SUBRATA K [US]; ELNER VICTOR [US]; KURTZ RON [US]; LICHTER PAUL [US]; LIU XINBING [US]; PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
**PA** - UNIV MICHIGAN [US]  
**AP** - AT 95916130/95-EP 19950329 [1995EP-0916130]  
**PR** - US 224961/94-A 19940408 [1994US-0224961]  
**IC** - B23K-026/00; A61B-017/22

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**DT** - AT-R  
**ACTE** - 19971115 AT/REF-P  
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19980415 AT/UEP [+]  
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**AP** - EP 95916130/95 19950329 [1995EP-0916130]  
**DT** - EP-P  
**ACTE** - 19950329 EP/AE-A  
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19970122 EP/A1 [+]  
PUBLICATION OF APPLICATION WITH SEARCH REPORT  
19970122 EP/17P [+]  
REQUEST FOR EXAMINATION FILED  
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FIRST EXAMINATION REPORT  
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19971105 EP/AK-B1 [+]  
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UP - 2002-17

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**PN** - AU 22741/95 A1 19951030 [AU9522741]  
**TI** - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
**IN** - MOUROU GERARD A; DU DETAO; DUTTA SUBRATA K; ELNER VICTOR;  
KURTZ RON; LICHTER PAUL; LIU XINBING; PRONKO PETER P; SQUIER  
JEFFREY A  
**PA** - UNIV MICHIGAN  
**AP** - AU 22741/95-A 19950329 [1995AU-0022741]  
**PR** - US 224961/94-A 19940408 [1994US-0224961]  
WO 9503863/95(US)-W 19950329 [1995WO-US03863]  
**IC** - B23K-026/00; A61B-017/22

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**PN** - AU 684633 B2 19971218 [AU-684633]  
**TI** - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
**IN** - MOUROU GERARD A; DU DETAO; DUTTA SUBRATA K; ELNER VICTOR;  
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JEFFREY A  
**PA** - UNIV MICHIGAN  
**AP** - AU 22741/95-A 19950329 [1995AU-0022741]  
**PR** - US 224961/94-A 19940408 [1994US-0224961]  
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**IC** - B23K-026/00; A61B-017/22

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**4 / 12 INPADOC - ©INPADOC**

**PN** - CA 2186451 AA 19951019 [CA2186451]  
**TI** - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
**LA** - ENG  
**IN** - MOUROU GERARD A [US]; DU DETAO [US]; DUTTA SUBRATA K [US]; ELNER  
VICTOR [US]; KURTZ RON [US]; LICHTER PAUL [US]; LIU XINBING [US];  
PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
**PA** - UNIV MICHIGAN [US]  
**AP** - CA 2186451/95-A 19950329 [1995CA-2186451]  
**PR** - US 224961/94-A 19940408 [1994US-0224961]  
**IC** - B23K-026/00; A61B-017/22; A61B-017/36

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**UP** - 1998-31



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**5 / 12 INPADOC - ©INPADOC**

**PN** - DE 69500997 C0 19971211 [DE69500997]  
**TI** - VERFAHREN ZUM KONFIGURATIONSTEUERN VON LASERINDUZIERTEM  
ZERSTOEREN UND ABTRAGEN  
**IN** - MOUROU GERARD [US]; DU DETAO [US]; DUTTA SUBRATA [US]; ELNER  
VICTOR [US]; KURTZ RON [US]; LICHTER PAUL [US]; LIU XINBING [US];  
PRONKO PETER [US]; SQUIER JEFFREY [US]  
**PA** - UNIV MICHIGAN [US]  
**AP** - DE 69500997/95-A 19950329 [1995DE-6000997]  
**PR** - US 224961/94-A 19940408 [1994US-0224961]  
WO 9503863/95(US)-W 19950329 [1995WO-US03863]  
**IC** - B23K-026/00; A61B-017/22

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**PN** - DE 69500997 [DE69500997]  
**DT** - DE-P  
**ACTE** - 19971211 DE/REF-P  
CORRESPONDS TO  
(EP 754103 19971211 [EP-754103])  
  
19980430 DE/8373  
TRANSLATION OF PATENT DOCUMENT OF EUROPEAN PATENT WAS  
RECEIVED AND HAS BEEN PUBLISHED  
  
19981203 DE/8364 [+]  
NO OPPOSITION DURING TERM OF OPPOSITION  
**UP** - 1998-51

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**2 / 2 LEGALI - ©LEGSTAT**

**PN** - EP 754103 [EP-754103]  
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**DT** - EP-P  
**ACTE** - 19950329 EP/AE-A  
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DESIGNATED CONTRACTING STATES IN AN APPLICATION WITH SEARCH  
REPORT:  
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE  
  
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AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

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IT: TRANSLATION FOR A EP PATENT FILED  
STUDIO TORTA S.R.L.

19971211 EP/REF-P  
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UP - 2002-17

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**PN** - DE 69500997 T2 19980430 [DE69500997]  
**TI** - VERFAHREN ZUM KONFIGURATIONSTEUERN VON LASERINDUZIERTEM  
ZERSTOEREN UND ABTRAGEN  
**IN** - MOUROU GERARD [US]; DU DETAO [US]; DUTTA SUBRATA [US]; ELNER  
VICTOR [US]; KURTZ RON [US]; LICHTER PAUL [US]; LIU XINBING [US];  
PRONKO PETER [US]; SQUIER JEFFREY [US]  
**PA** - UNIV MICHIGAN [US]  
**AP** - DE 69500997/95-A 19950329 [1995DE-6000997]  
**PR** - US 224961/94-A 19940408 [1994US-0224961]  
WO 9503863/95(US)-W 19950329 [1995WO-US03863]  
**IC** - B23K-026/00; A61B-017/22

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**PN** - DE 69500997 [DE69500997]

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**UP** - 1998-51

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FIRST EXAMINATION REPORT  
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*7 / 12 INPADOC - ©INPADOC*

**PN** - EP 754103 A1 19970122 [EP-754103]  
**TI** - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
**LA** - ENG  
**IN** - MOUROU GERARD A [US]; DU DETAO [US]; DUTTA SUBRATA K [US]; ELNER  
VICTOR [US]; KURTZ RON [US]; LICHTER PAUL [US]; LIU XINBING [US];  
PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
**PA** - UNIV MICHIGAN [US]  
**AP** - EP 95916130/95-A 19950329 [1995EP-0916130]  
**PR** - WO 9503863/95(US)-W 19950329 [1995WO-US03863]  
US 224961/94-A 19940408 [1994US-0224961]  
**IC** - B23K-026/00; A61B-017/22  
**DS** - AT\* BE\* CH\* DE\* DK\* ES\* FR\* GB\* GR\* IE\* IT\* LI\* LU\* MC\* NL\* PT\* SE\*

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NO OPPOSITION DURING TERM OF OPPOSITION  
**UP** - 1998-51



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**UP** - 1998-17

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**PN** - EP 754103 [EP-754103]  
**AP** - EP 95916130/95 19950329 [1995EP-0916130]  
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**ACTE** - 19950329 EP/AE-A  
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REQUEST FOR EXAMINATION FILED  
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19970514 EP/17Q [+]  
FIRST EXAMINATION REPORT  
970326  
  
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DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT  
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STUDIO TORTA S.R.L.

19971211 EP/REF-P  
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**PN** - EP 754103 B1 19971105 [EP-754103]  
**TI** - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
**LA** - ENG  
**IN** - MOUROU GERARD A [US]; DU DETAO [US]; DUTTA SUBRATA K [US]; ELNER  
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US 224961/94-A 19940408 [1994US-0224961]  
**IC** - B23K-026/00; A61B-017/22  
**DS** - AT\* BE\* CH\* DE\* DK\* ES\* FR\* GB\* GR\* IE\* IT\* LI\* LU\* MC\* NL\* PT\* SE\*

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**PN** - DE 69500997 [DE69500997]  
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19980430 DE/8373  
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19981203 DE/8364 [+]  
NO OPPOSITION DURING TERM OF OPPOSITION

**UP** - 1998-51

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**PN** - AT 159880 [ATE159880]  
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PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION  
**UP** - 1998-17

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**PN** - EP 754103 [EP-754103]  
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**DT** - EP-P  
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REQUEST FOR EXAMINATION FILED  
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SPECIFICATION:  
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE  
  
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10 / 12 INPADOC - ©INPADOC

PN - US 37585 E1 20020319 [US--37585]  
TI - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
IN - MOUROU G EACUTE RARD [US]; DU DETAO [US]; DUTTA SUBRATA K [US];  
ELNER VICTOR [US]; KURTZ RON [US]; LICHTER PAUL R [US]; LIU XINBING  
[US]; PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
PA - UNIV MICHIGAN [US]  
AP - US 366685/99-A 19990804 [1999US-0366685]  
PR - US 366685/99-A 19990804 [1999US-0366685]  
US 224961/94-A5 19940408 [1994US-0224961]  
IC - B23K-026/02; B23K-026/40

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PN - US 5656186 A 19970812 [US5656186]  
TI - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
IN - MOUROU GERARD A [US]; DU DETAO [US]; DUTTA SUBRATA K [US]; ELNER  
VICTOR [US]; KURTZ RON [US]; LICHTER PAUL R [US]; LIU XINBING [US];  
PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
PA - UNIV MICHIGAN [US]  
AP - US 224961/94-A 19940408 [1994US-0224961]  
PR - US 224961/94-A 19940408 [1994US-0224961]  
IC - B23K-026/02



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*1 / 1 LEGALI - ©LEGSTAT*

**PN** - US 5656186 [US5656186]  
**AP** - US 224961/94 19940408 [1994US-0224961]  
**DT** - US-P  
**ACTE** - 19940408 US/AE-A  
APPLICATION DATA (PATENT)  
US 224961/94 19940408 [1994US-0224961]

19940902 US/AS02  
ASSIGNMENT OF ASSIGNOR'S INTEREST  
REGENTS OF THE UNIVERSITY OF MICHIGAN, THE WOLVERINE TOWER,  
ROOM 2071 3003 S. ST \* MOUROU, GERARD A. : 19940407; DU, DETAO :  
19940407; DUTTA, SUBRATA K. : 19940407; ELNER, VICTOR : 19940407; KURTZ,  
RON : 19940407;

19970812 US/A  
PATENT

19990928 US/RF  
REISSUE APPLICATION FILED  
19990804

20010731 US/RF  
REISSUE APPLICATION FILED  
20000201

20011016 US/RF  
REISSUE APPLICATION FILED  
20010201

**UP** - 2001-44

**PN** - WO 9527587 A1 19951019 [WO9527587]  
**TI** - METHOD FOR CONTROLLING CONFIGURATION OF LASER INDUCED  
BREAKDOWN AND ABLATION  
**LA** - ENG  
**IN** - MOUROU GERARD A [US]; DU DETAO [US]; DUTTA SUBRATA K [US]; ELNER  
VICTOR [US]; KURTZ RON [US]; LICHTER PAUL [US]; LIU XINBING [US];  
PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
**PA** - UNIV MICHIGAN [US]; MOUROU GERARD A [US]; DETAO DU [US]; DUTTA  
SUBRATA K [US]; ELNER VICTOR [US]; KURTZ RON [US]; LICHTER PAUL  
[US]; LIU XINBING [US]; PRONKO PETER P [US]; SQUIER JEFFREY A [US]  
**AP** - WO US 9503863/95(US)-A 19950329 [1995WO-US03863]  
**PR** - US 224961/94-A1 19940408 [1994US-0224961]  
**IC** - B23K-026/00; A61B-017/22  
**DS** - AM\* AT\* AU\* BB\* BG\* BR\* BY\* CA\* CH\* CN\* CZ\* DE\* DK\* EE\* ES\* FI\* GB\*  
GE\* HU\* IS\* JP\* KE\* KG\* KP\* KR\* KZ\* LK\* LR\* LT\* LU\* LV\* MD\* MG\* MN\*  
MW\* MX\* NL\* NO\* NZ\* PL\* PT\* RO\* RU\* SD\* SE\* SG\* SI\* SK\* TJ\* TM\* TT\*  
UA\* UG\* US\* UZ\* VN\* KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT  
LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

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1/2 LEGALI - ©LEGSTAT

**PN** - CA 2186451 [CA2186451]  
**DT** - CA-P  
**ACTE** - 19960925 CA/REFW-P  
CORRESPONDS TO PCT APPLICATION  
<WO 9527587> [WO9527587]  
**UP** - 1998-31

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PN - WO 9527587 [WO9527587]  
 AP - WO 9503863/95(US) 19950329 [1995WO-US03863]  
 DT - WO-P  
 ACTE - 19950329 WO/AE-A  
 APPLICATION DATA  
 WO 9503863/95(US) 19950329 [1995WO-US03863]

19951019 WO/AK-A1 [+]

DESIGNATED STATES CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT

AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG  
 KP KR KZ LK LR LT LU LV MD MG MN MW MX NL NO NZ PL PT RO RU SD SE  
 SG SI SK TJ TM TT UA UG US UZ VN

19951019 WO/AL-A1 [+]

DESIGNATED COUNTRIES FOR REGIONAL PATENTS CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT

KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ  
 CF CG CI CM GA GN ML MR NE SN TD TG

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PUBLICATION OF THE INTERNATIONAL APPLICATION WITH THE INTERNATIONAL SEARCH REPORT

19951207 WO/DFPE

REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE

19951227 WO/121

EP: PCT APP. ART. 158 (1)

19960925 WO/ENP-AA

ENTRY INTO THE NATIONAL PHASE IN:  
 <CA 2186451>

19970130 WO/REG; DE/8642 [-]

DE: WITHDRAWAL  
 <DE>

UP - 1998-31